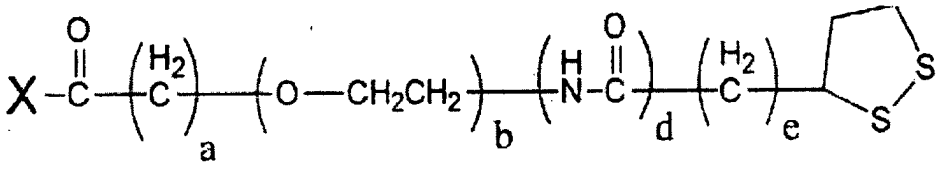
AMENDMENTS TO THE CLAIMS

1. (withdrawn): A linker compound for use in arrangement of sugar molecules on a supporter,

the linker compound having a structure represented by following general formula (1), where a, b, d, e are independently an integer of 0 to 6,

X has a structure serving as a multi-branched structure moiety including three or more hydrocarbon derivative chains, wherein the hydrocarbon derivative chains each include an aromatic amino group at an end thereof, and may or may not include a carbon-nitrogen bond in a main chain thereof, and

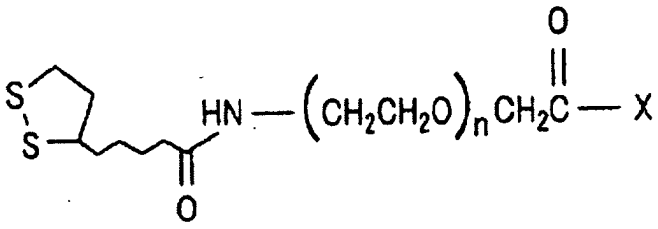
X has oligoethylene oxide therein when b is 0.



....(1)

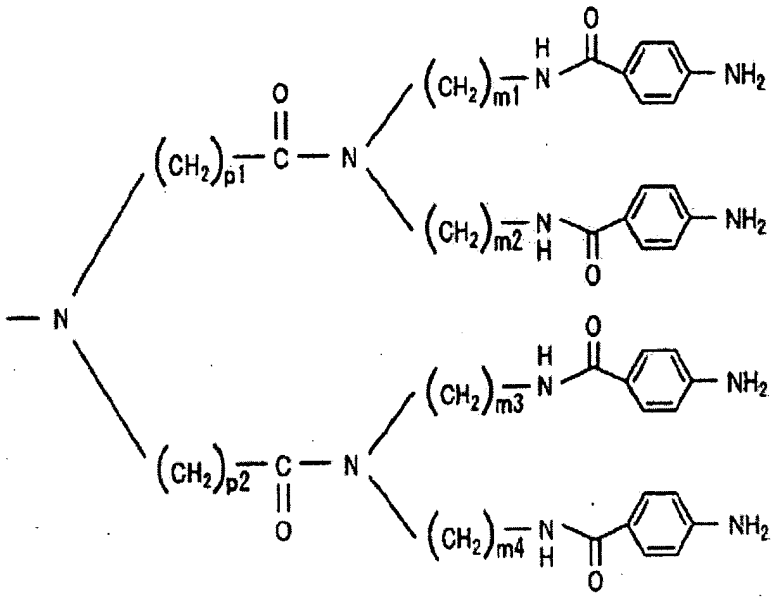
2. (withdrawn): The linker compound according to claim 1 of a structure represented by following general formula (2), where n is an integer of 1 to 6, and

X has a structure serving as a multi-branched structure moiety including three or more hydrocarbon derivative chains, wherein the hydrocarbon derivative chains each include an aromatic amino group at an end thereof, and may or may not include a carbon-nitrogen bond in a main chain thereof.



....(2)

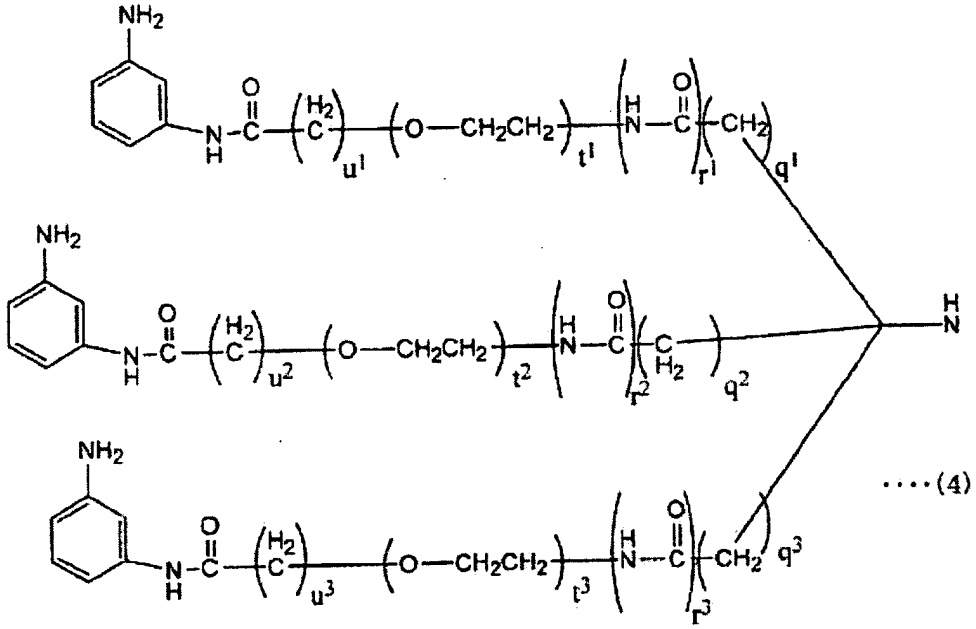
3. (withdrawn): The linker compound according to claim 1, where X has a structure represented by following general formula (3),



.... (3)

wherein ml, m2, m3, m4, p1 and p2 are independently an integer of 1 to 6.

4. (withdrawn): The linker compound according to claim 1, where X has a structure represented by following general formula (4),

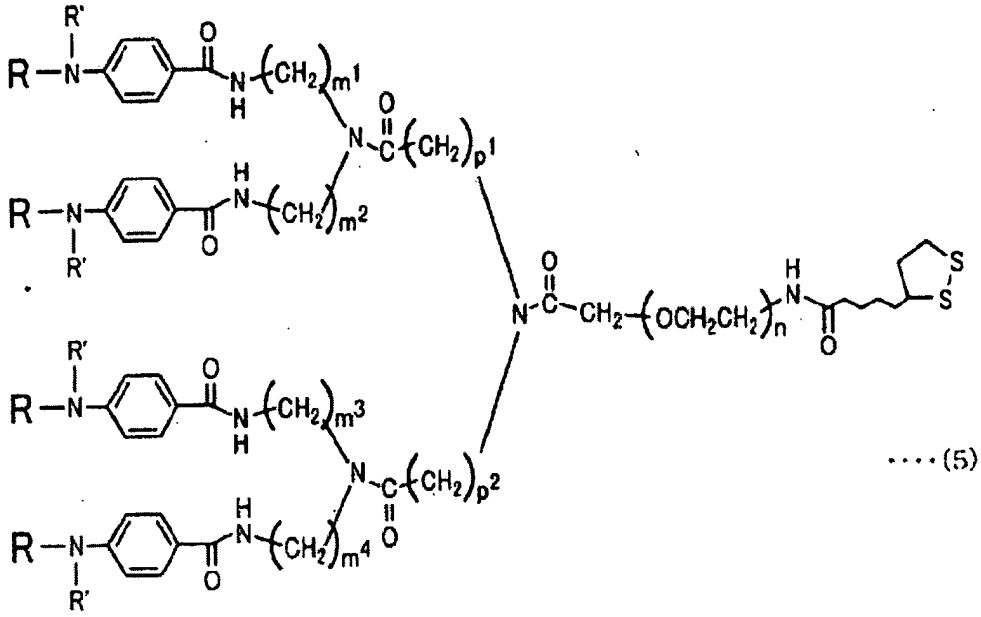


wherein q^1, q^2, q^3, r^1, r^2, r^3, t^1, t^2, t^3, u^1, u^2, and u^3 are independently an integer of 0 to 6.

5. (withdrawn): A ligand conjugate including the linker compound according to claim 1, wherein an aromatic amino group of the linker compound includes a sugar molecule introduced therein.

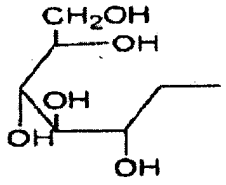
6. ~~The ligand conjugate of claim 5,~~

A ligand conjugate including a linker compound having a structure represented by following general formula (5), where m^1, m^2, m^3, m^4, n, p^1, and p^2 are independently an integer of 1 to 6, R′ is hydrogen (H) or R, and

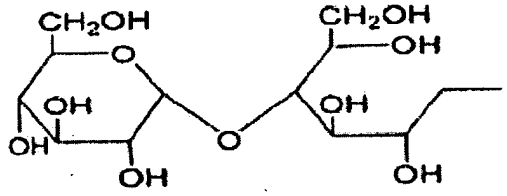


....(5)

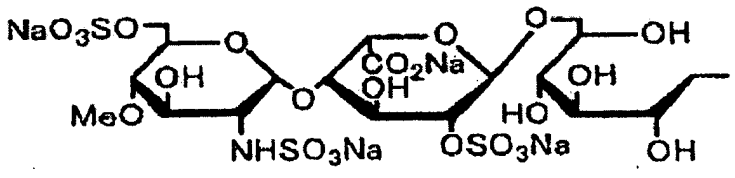
R is an oligosaccharide-derived compound selected from among the following formulae (6-1) through (6-6).



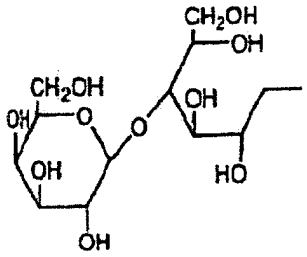
(6—1)



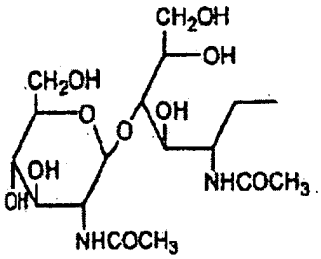
(6—2)



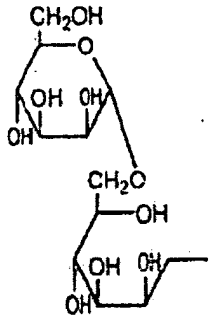
(6—3)



(6-4)

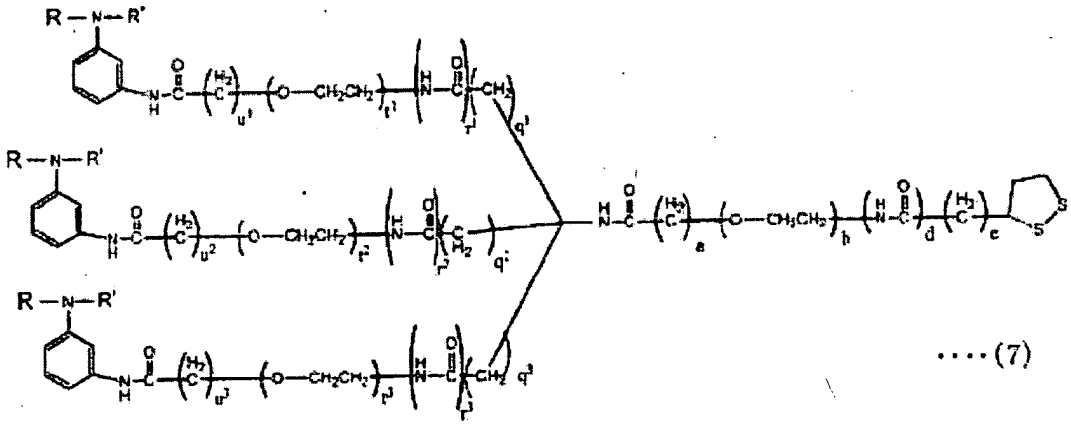


(6-5)



(6-6)

7. ~~The ligand conjugate of claim 5,~~ A ligand conjugate including a linker compound having a structure represented by following general formula (7),



....(7)

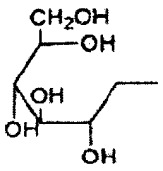
where a, b, d, e, q^1, q^2, q^3, r^1, r^2, r^3, t^1, t^2, t^3, u^1, u^2, and u^3 are independently an integer of 0 to 6,

t^1, t^2, and t^3 are not 0 when b is 0,

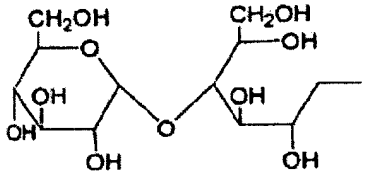
b is not 0 when t^1, t^2, and t^3 are 0,

R′ is hydrogen (H) or R, and

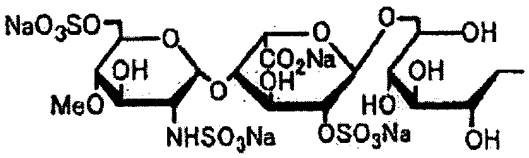
R is an oligosaccharide-derived compound selected from among the following formulae (6-1) through (6-6).



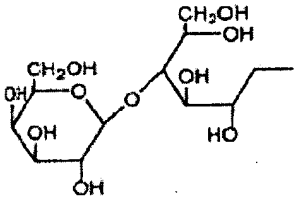
(6-1)



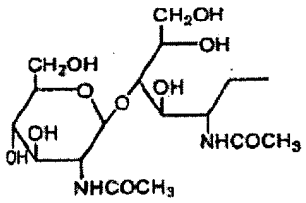
(6-2)



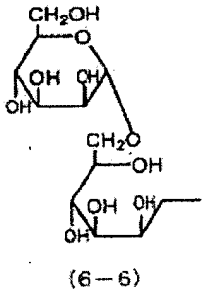
(6-3)



(6-4)



(6-5)



(6-6)

8. (withdrawn): A method to prepare a linker compound according to claim 1, comprising the steps of:

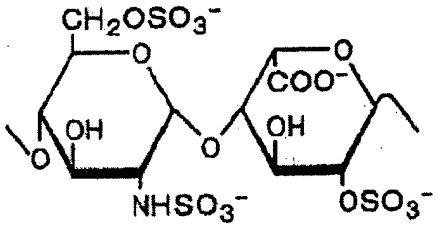
carrying out a condensation reaction between thioctic acid and an amine compound including three or more branched chains each having an aromatic amino group end protected by a protecting group; and

deprotecting the protecting group at the aromatic amino group end.

9. (withdrawn): A method to prepare a ligand conjugate, comprising the step of carrying out a reductive amination reaction by using the linker compound of claim 1 and a sugar molecule.

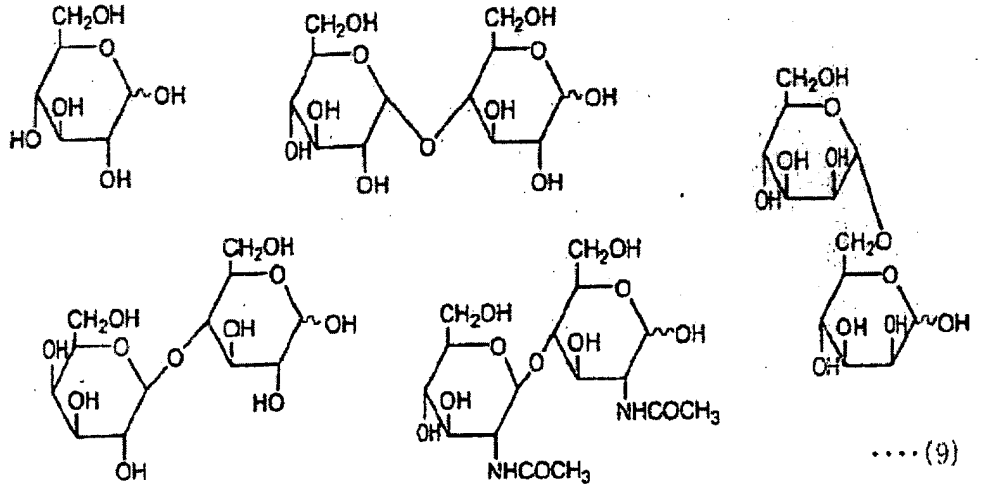
10. (withdrawn): The method of claim 9, wherein:

the sugar molecule is a sulfated oligosaccharide having a heparin partial structure of disaccharide unit represented by the following general formula (8).



....(8)

11. (withdrawn): The method of claim 9, wherein: the sugar molecule is at least one oligosaccharide selected from the group consisting of:



....(9)

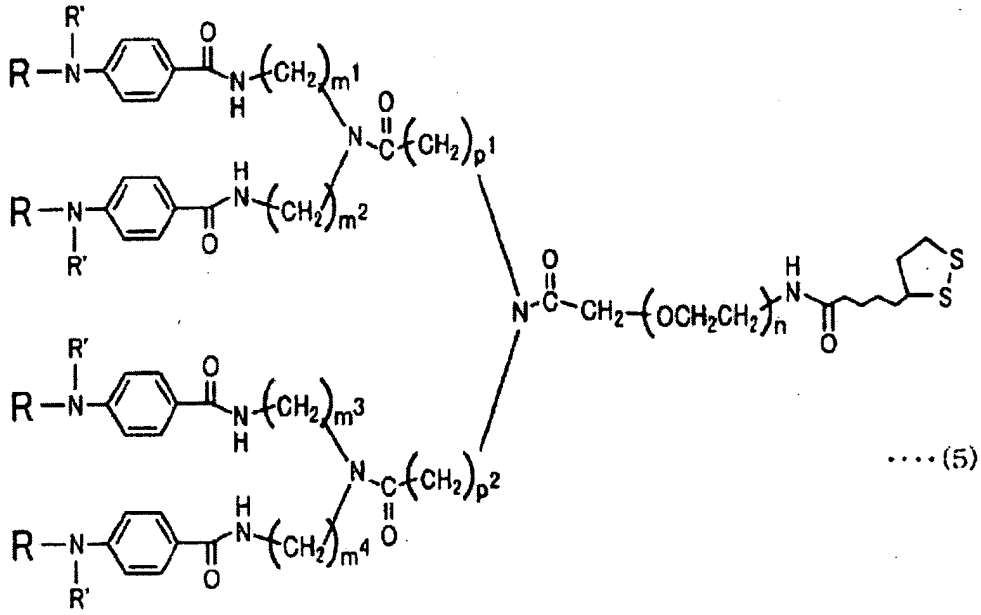
12. (withdrawn): A method of arranging a sugar molecule on a surface of a supporter, comprising the step of:

causing a solution containing the ligand conjugate of claim 5 to come into contact with a supporter comprising metal on a surface thereof.

13. (withdrawn): A ligand carrier which comprises the ligand conjugate of claim 5 immobilized on a supporter comprising metal on a surface thereof.

14. (withdrawn): A sensor chip for a surface plasmon resonance, comprising the ligand conjugate according to claim 5 immobilized onto a surface thereof.

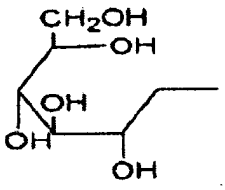
15. (withdrawn): The sensor chip of claim 14, wherein the ligand conjugate has a structure represented by formula (5),



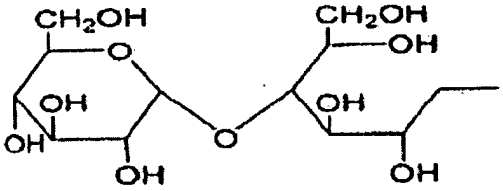
....(5)

where m^1, m^2, m^3, m^4, n, p^1, and p^2 are independently an integer of 1 to 6, R′ is hydrogen (H) or R, and

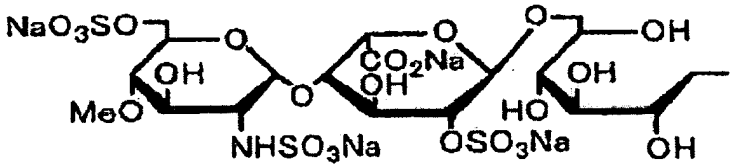
R is an oligosaccharide-derived compound selected from among the following formulae (6-1) through (6-6).



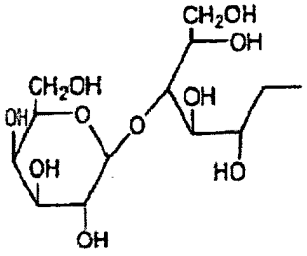
(6－1)



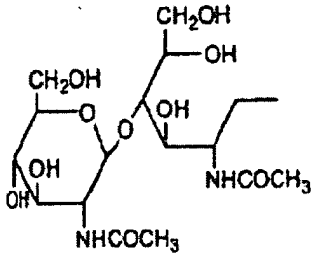
(6－2)



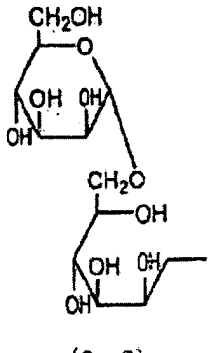
(6－3)



(6－4)

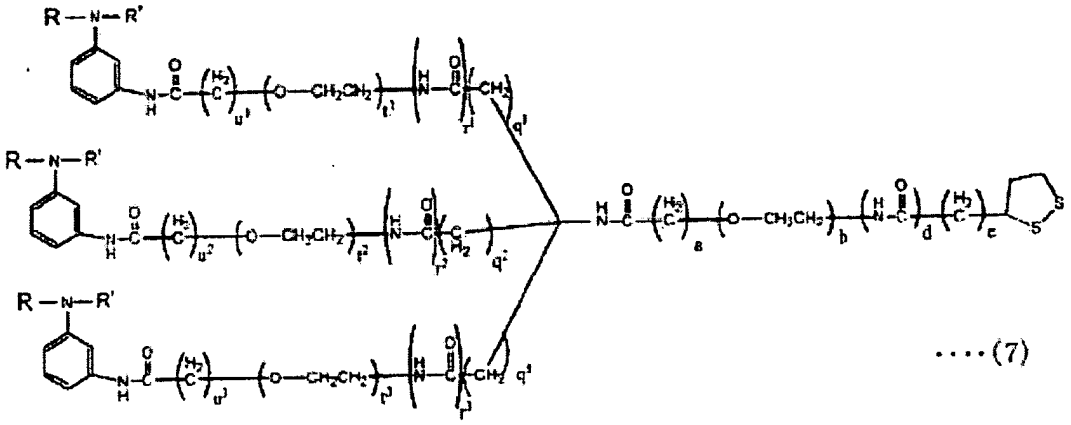


(6－5)



(6－6)

16. (withdrawn): The sensor chip of claim 14, wherein the ligand conjugate has a structure represented by formula (7),



....(7)

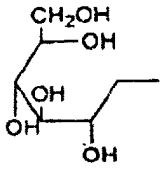
where a, b, d, e, q^1, q^2, q^3, r^1, r^2, r^3, t^1, t^2, t^3, u^1, u^2, and u^3 are independently an integer of 0 to 6,

t^1, t^2, and t^3 are not 0 when b is 0,

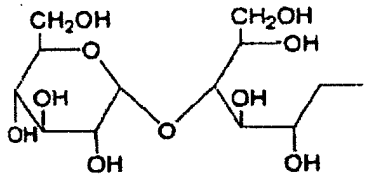
b is not 0 when t^1, t^2, and t^3 are 0,

R′ is hydrogen (H) or R, and

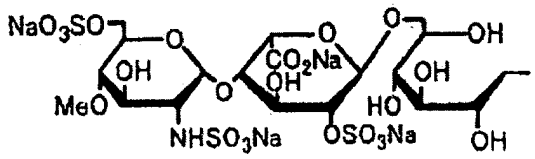
R is an oligosaccharide-derived compound selected from among the following formulae (6-1) through (6-6).



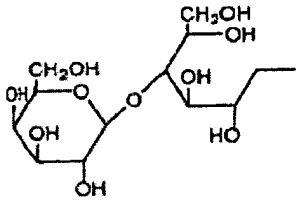
(6-1)



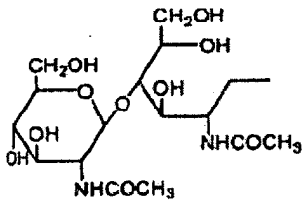
(6-2)



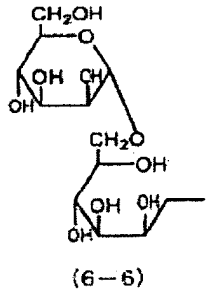
(6-3)



(6-4)



(6-5)



(6-6)

17. (withdrawn): The compound of claim 3, wherein:

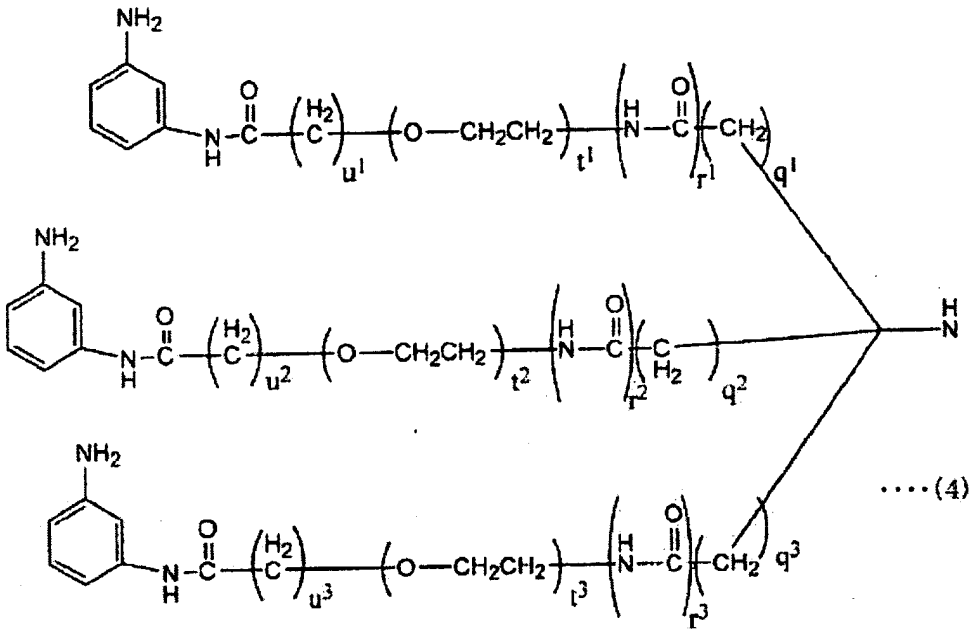
a is 1;

b is 1-6;

d is 1; and

e is 4.

18. (withdrawn): The linker compound according to claim 2, where X has a structure represented by following general formula (4),



....(4)

wherein q^1, q^2, q^3, r^1, r^2, r^3, t^1, t^2, t^3, u^1, u^2, and u^3 are independently an integer of 0 to 6.